

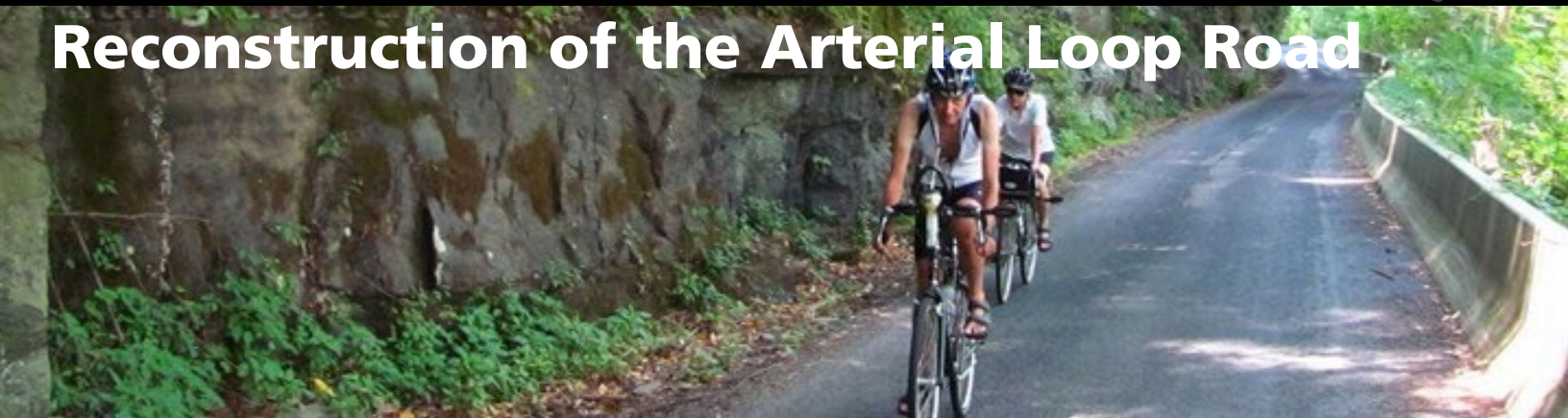
# Delaware Water Gap National Recreation Area

National Park Service  
U.S. Department of the Interior

Federal Lands Transportation Program



## Reconstruction of the Arterial Loop Road



Above: Old Mine Road (NPS photos)

### Mega-Project\* Profile: DEWA Road Reconstruction

Estimated cost: \$90M  
(preliminary)

Percentage of NE Region's  
FLTP Annual Allotment:  
460%

Percentage of NPS FLTP  
Annual Allotment: 45%

**An Aging Road System.** With annual visitation of 5.1 million visitors, Delaware Water Gap National Recreation Area (DEWA) is among the top ten most visited parks in the National Park System. Three main arterials within DEWA make up a significant portion of the park's road system. They are: Old Mine Road, River Road, and US Route 209. Referred to collectively as the *Arterial Loop Road*, these three roads span both the Pennsylvania and New Jersey sections of the park, and connect all major recreational and cultural sites.

While DEWA did not become a national park unit until 1965, the roadway system it inherited has been in place for a long time. All three routes were part of the area's Indian Trail Network that became carriage roads and finally automobile roads. Old Mine Road dates back to 1650; River Road dates to 1744 but was first paved in 1934, and US Route 209

was made a paved road in the 1920s by Gifford Pinchot. The Arterial Loop Road encircles the Delaware River and spans the length of the park, totaling about 63 miles.

The three roads are important historical and cultural landmarks of the region. The original carriage roads were laid out by early European settlers and extended from Philadelphia to Milford, Pennsylvania, and from Deer Park, New York, to Shoemakers Ferry, New Jersey. The portions of Old Mine Road and River Road within the park are the last remaining sections that most closely resemble the original character, and capture the historic rural charm. These corridors have been important conveyors of people, goods, ideas, and institutions. In this capacity, the roads have put an imprint on the valley that exists very tangibly. But today, they are in a much-deteriorated state.

**Construction Targets.** The primary objective of this reconstruction effort is to increase the functionality of an aging, deficient road system that is experiencing increased visitor use including bicyclists, pedestrians, and motor vehicles. The project would improve visitor safety by significantly reducing the total number of accidents, injuries and deaths, and would minimize driver distractions due to rough road conditions. At the same time, reconstruction would "enhance visitor experience while providing safe and efficient accommodation of park visitors. . ." (Park Road Standards, NPS 1984).

### Roadway Safety and Existing Issues.

The roads comprising the Arterial Loop Road are at the end of their design life. Cumulative effects of years of traffic loading have worn the pavement surface and weakened its substructure. Factors contributing to roadbed deterioration include:

- unstable slope shoulders



\* Mega Projects: The NPS transportation system is supported, in part, by funds from the Federal Lands Transportation Program (FLTP). Currently, the NPS is authorized an annual budget of \$268 million from the FLTP. These funds are apportioned by formula among the seven NPS Regions. Most of these funds are used for "transportation asset management" – that is, to pay for the work required to keep existing assets in good condition. There are some projects, such as a major bridge repair or ship replacement, that require a much larger amount of funding than is available on an annual basis to a Region. These we call "Mega Projects." The NPS is pursuing strategies to fund these projects.

- past flooding
- 37 miles of poor and critically failed drainage ditches
- vegetation encroachment
- 117 culverts, many of which are failing, partially or totally plugged from siltation and debris
- numerous potholes and damaged shoulders
- failed pavement surface at many locations
- constant maintenance and repair resulting from inadequate road base and drainage problems
- water getting under successive layers of asphalt and/or the concrete pad

*Old Mine Road* is the primary north-south route on the New Jersey side of the park, and provides the only access to major visitor facilities and attractions on the east side of the park. Old Mine Road is a two-way paved route, generally 18 to 20-feet wide. The roadway traverses the Old Mine Road Historic District and provides access to the Millbrook Historic District. It is listed as a NJ DOT bicycle route. During peak visitation, use of major facilities on South Old Mine Road ranges from 600 to 1000 visitors per day.

*River Road* is a narrow, two-lane road running through rolling terrain, with steep hills and sharp curves. The typical cross section is 16 to 19 feet of asphalt pavement with no shoulder. Limited locations along the road exist where drivers can safely pull off. It is the only access to major visitor use facilities including the largest swim beach, picnic areas, a model airplane park, boat and canoe launches, hiking trails, hunting/fishing access, and cycling. Peak traffic is 3100 vehicles per day. A total of 45 accidents were reported on River Road from 1998 through 2003.

*US Route 209* is the most traveled road in the park, with an Average Daily Traffic volume of 6,470 vehicles per day. This road is the main access route to the park and to five major visitor use areas, including two visitor centers, campgrounds, hiking, hunting, and fishing access, and three boat launches. US Route 209 serves as the primary connector between state-designated long distance cycling routes that pass through northern and southern gateway communities, and for north-south traffic traveling between I-80 and I-84. It

carries park visitors as well as year-round local and commuter traffic from large residential developments.

US Route 209 is also the most dangerous road in the National Park System, based on NPS multi-year crash data. From 2001 to 2007, for example, there were 1,220 crashes and 12 fatalities at DEWA, with nearly all of the accidents occurring on US Route 209 and River Road.

In the early 1930s, under the Gifford Pinchot road-building program, US Route 209 was paved in concrete to 16' wide, with two 8-foot travel lanes. Approximately 18 miles of the existing road surface is still underlain with this 8" concrete base. Between 1941 and 1965, PennDOT performed maintenance and repaving of the roadway. The rehabilitation of US Route 209 was originally proposed under the 1986 Engineering Study. It was to be completed in five phases of work with approximately four miles of roadway in each phase.

Due to a lack of sufficient funding, with the exception of pavement overlays and a recent emergency project, no work to address the core deficiencies of this road has been done.

Below:  
Emergency at MP15 on Rt 209



Landslides



Flood Washouts



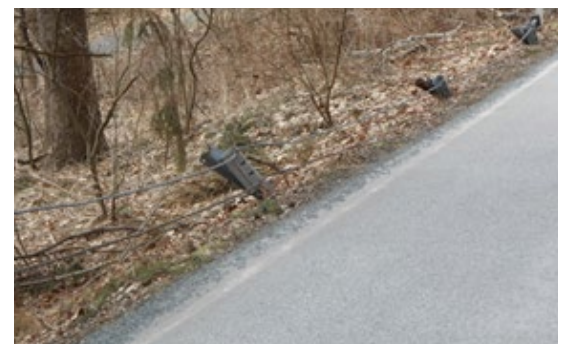
Major Cracking

Last Updated 2016 March

Below: River Road



Surface deterioration, potholes



No shoulders, poor guardrails